American Society of Naturalists, American Microscopical Society, Ecological Society of America, Entomological Society of America, Ncbraska Academy of Science, and an honorary member of the Michigan Academy of Science, in addition to those societies mentioned above. He belonged also to the Society of the Sigma Xi, Phi Delta Theta fraternity, and the American Association of University Professors. He was a thirty-third degree Scottish Rite Mason, and his burial in Wyuka Cemetery in Lincoln, on January 25, was in charge of Lincoln Lodge No. 19, A. F. & A. M.

UNIVERSITY OF NEBRASKA. LINCOLN, NEBR.

BIRDS AT A RAIN-POOL IN MASSACHUSETTS IN OCTOBER, 1933

BY SAMUEL A. ELIOT. JR.

Readers of the WILSON BULLETIN may be interested to imagine the Connectieut Valley of New England as a miniature Mississippi Valley—a north-south trough (a natural migration route) with high ranges on the west and lower hills on the east. But the average midwestern bird-student might be surprised that although it is so near the ocean, this minor inland river-system, with all its ponds and swamps, lacks or almost lacks a number of water birds. Just because the sea is within rather easy flying-distance, sca-loving birds are hardly more than accidental in the middle section of the Valley (that which crosses Massachusetts), and most shore birds are rare. Among our "accidentals" may be named the Red-throated Loon, Leach's Petrel, Gannet, Barrow's Golden-eye, Surf Scoter, Ruddy Turnstone, Hudsonian Curlew, Knot. Purple Sandpiper, Red Phalarope, Great Black-backed Gull, Laughing Gull, Common Tern, and Dovekie. Among water birds which are now and then recorded, not by accident but as transients in very small numbers, we list the Double-crested Cormorant, American Brant, Snow Goose (probably Greater), Gadwall, Shoveller, Redhead, Canvas-back, Old-squaw, White-winged Scoter, Ruddy Duck, Redbreasted Merganser, Golden Plover, Black-bellied Plover, Willet (probably Western), Red-backed Sandpiper, Dowitcher (subsp.?), Sanderling. Northern Phalarope, Black Tern, and Brünnich's Murre. At the seashore, a hundred miles away, most of these are regular and some arc abundant. Many of them are far more common in the middle of North America, a thousand miles inland, than here. Common both farther inland and on the coast, but not yet once discovered here, are the Piping Plover, Western Sandpiper, and others.

With great delight, therefore, was I shown by a bird-loving friend a rain-pool in Hadley that teemed with water birds. It had existed only since the terrific rain of September 16, 1933, and was not found until September 30. It filled the lower angles of two fields separated by a brook—a bare tobacco-field on the east, a weedy cornfield on the west. Farther east was a steep ascent, clothed with birch and maple; farther west, more farm-fields; to the north the bush-bordered brook, and to the south a stretch of half-drowned, boggy land in which one could often find shore birds that one had missed at the pool itself. The Connecticut River makes a great bend around Hadley, and this pool was not far east of a straight line across the peninsula, such as migrants flying down-stream would be likely to take. When flushed, the birds usually flew southwest or northwest towards the nearer parts of the river.

The only other places in the vicinity of Northampton where water birds could be looked for with expectancy were in the Oxbow region. five miles southwest of this pool; at the six small sewer-beds of Amherst, four miles east; and at the sandy river-bank, a mile or two south. which is a much better place in the late spring shore bird flight than in summer and fall. A few records of shore birds at these three locations are included in the accompanying table, but they were merely supplementary to the surprising assemblies found morning after morning at the Hadley pool. The latter was forty minutes' bicycle-ride from my home, but so striking was the opportunity that I missed not a morning from September 30 through November 2.

On the first day, the friend who took me to the pool had seen. he said, "a lot of Dowitchers, and some Stilt Sandpipers". The latter has never been recorded here, and Dowitchers (since 1901) only in September, 1905, 1919. and 1928; so I was keenly disappointed that a few hours later neither species could be found. We did observe many Killdeers, several Greater and Lesser Yellow-legs, 3 Pectoral and 2 Solitary Sandpipers, and 1 Snipe; also a dozen Blue-winged Teal, 2 Green-winged, and 1 Pintail. The next day, arriving about sunrise, I noted 10 Blue-wings, 5 Green-wings, the Pintail, 5 Black Ducks, 3 Wood Ducks, and a Pied-billed Grebe, besides the shore birds

recorded on the table. Of these, the great prize was of course the Baird's Sandpiper. At Pittsfield on August 30, 1933, I had made what seems the first record of this species in western New England north of the Connecticut coast. At Hadley, on October 1, I saw the first in the Connecticut Valley.

The two Least Sandpipers of Oetober 1 were seen by another observer later in the morning. The White-rump was noted by still others in the late afternoon, consorting with the Baird's. One Least was at the pool October 2, 4. and 6—probably one and the same bird, temporarily absent on the "odd" days. The species had never previously been seen hereabouts later than September 7. The White-rump, though missed on Oetober 2. was present on the six following days. After a week of none, another showed up on October 16, a third Octo-



FIG. 7. The Rain-pool, with Mt. Holyoke in the distance (left), and Mt. Tom (right), between which the Connecticut River flows. Photographed by Dr. W. Elmer Ekblaw.

ber 19 and 21. On the 22d visibility was poor and the two smaller sandpipers companioning the first thrilling, too-absorbing Red-backed flew away before they were well viewed; but White-rump is the most probable identification. On the 24th no shore birds were at the pool when it was reached, at 7 A. M., but at 7:45 a floek of Killdeers with the still strangely red-backed, unmolted Dunlin I had noted among them on the 23d flew to it from the north, and a small sandpiper, "probably White-rump but perhaps Semipalmated" as I wrote at the time, came from the south and joined them. This flock fed on the upper, dry part of the tobacco field, not at the pool's edge. It flushed

<u></u>	
~	
99	
0	
· · ·	
\sim	
<u> </u>	
r 3	
T	
-	
100	
()	
2 -	
;)	
\cap	
\sim	
ber	
A	
-	
1D	
5	
-	
-	
-	
-	
2	
(T)	
_]	
-	
\cap	
_	
-	
-4	
3	
I	
\cup	
_	
C	
\odot	
\mathbf{S}	
PC	
-PC	
N-PC	
N-PC	
JN-PC	
VIN-PC	
AIN-PC	
AIN-PC	
RAIN-PC	
RAIN-PC	
RAIN-PC	
r RAIN-PC	
Y RAIN-PC	
IX RAIN-PC	
RY RAIN-PC	
RY RAIN-PC	
ARY RAIN-PC	
ARY RAIN-PC	
RARY RAIN-PC	
RARY RAIN-PC	
DRARY RAIN-PC	
ORARY RAIN-PC	
PORARY RAIN-PC	
PORARY RAIN-PC	
IPORARY RAIN-PC	
MPORARY RAIN-PC	
MPORARY RAIN-PC	
EMPORARY RAIN-PC	
'EMPORARY RAIN-PC	
TEMPORARY RAIN-PC	
TEMPORARY RAIN-PC	
TEMPORARY RAIN-PC	
A TEMPORARY RAIN-PC	
A TEMPORARY RAIN-PC	
A TEMPORARY RAIN-PC	
A TEMPORARY RAIN-PC	
T A TEMPORARY RAIN-PC	
T A TEMPORARY RAIN-PC	
AT A TEMPORARY RAIN-PC	
AT A TEMPORARY RAIN-PC	
AT A TEMPORARY RAIN-PC	
5 AT A TEMPORARY RAIN-PC	
S AT A TEMPORARY RAIN-PC	
DS AT A TEMPORARY RAIN-PC	
DS AT A TEMPORARY RAIN-PC	
(DS AT A TEMPORARY RAIN-PC	
RDS AT A TEMPORARY RAIN-PC	
IRDS AT A TEMPORARY RAIN-PC	
3IRDS AT A TEMPORARY RAIN-PC	
BIRDS AT A TEMPORARY RAIN-PC	
-BIRDS AT A TEMPORARY RAIN-PC	
E-BIRDS AT A TEMPORARY RAIN-PC	
E-BIRDS AT A TEMPORARY RAIN-PC	
(E-BIRDS AT A TEMPORARY RAIN-PC	
RE-BIRDS AT A TEMPORARY RAIN-PC	
RE-BIRDS AT A TEMPORARY RAIN-PC	
ORE-BIRDS AT A TEMPORARY RAIN-PC	
ORE-BIRDS AT A TEMPORARY RAIN-PC	
HORE-BIRDS AT A TEMPORARY RAIN-PC	
HORE-BIRDS AT A TEMPORARY RAIN-PC	
SHORE-BIRDS AT A TEMPORARY RAIN-POOL IN HADLEY, MASS., IN OCTOBER, 1933	
SHORE-BIRDS AT A TEMPORARY RAIN-PC	

-1-440 and have A Linda :...].

[Figures]	[Figures in brackets represent birds reported by other observers there]	
SPECIES Date 1	$ = \begin{bmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 \\ 11 & 12 & 13 & 14 & 15 & 10 & 11 & 12 & 13 & 14 & 15 & 16 & 17 & 18 & 19 & 20 & 21 & 22 & 23 & 24 & 25 & 26 & 27 & 28 & 28 & 28 & 28 & 28 & 28 & 28$	6 27 28 29 30 31
Killdeer	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	2 4 4
Ring-neck Plover		
Golden Plover		
Black-bellied Plover.		1†
Wilson's Snipe	15 16 20 20 10 15 6 5 25 12 6 9 13 15 106 2 12 3 5 1	4 1 4
Spotted Sandpiper		
Solitary Sandpiper.		
Greater Yellowlegs.	6 8 3 4 2 5 1	1+11 1 3 3
Lesser Yellowlegs.	6 4 2 2 3 3 3 2 2 2 1 1 1 1 1 1 1	
Pectoral Sandpiper	6 3 5 2 3 2 1 1 1 2	2 2
White-rumped Sandpiper	[1] 1 1 1 1 1 1 1 1 1	11 31 1
Baird's Sandpiper		
Least Sandpiper		
Red-backed Sandpiper		+ 2 [1]
Semipalmated Sandpiper	1 1 2 2 2 2 3 4 5 7 5 6 5 2 2 2 2 1 1 1 1 1 1 1 1	
*—At River. \ddagger —A miles east. \ddagger —4 miles east. \parallel —5 miles southwest. \ddagger — $1/_4$ mile west.	les west. le east. J.	

The Wilson Bulletin-March, 1935

promptly, flew far southwest, and descended on another waterless field there. On the 25th, the Dunlin and White-rump were feeding at the water's edge but flew up to join the Killdcers on the higher ground and departed with them for another dry field to the west. Later another, more brownish, scaly-backed, summery White-rump appeared at the pool's margin with two very small Pectoral Sandpipers. On the 26th, after a frigid night, the pool was iced over, but a reconnaissance across the farm land to the west flushed two Dunlins, in the gray dress proper to the season, and chanced upon the headless body of a gray White-rump, probably destroyed by a cat. On the 27th the pool was not visited until noon, when little ice was left. Two Red-backs were there, with-not a White-rump-but a most surprising Semipalmated Sandpiper. This species had shown an orderly wax and wane in the first nineteen days of October, its numbers swelling to a maximum of seven on October 10. then dwindling evenly to the last one, October 17-19. Our latest previous date had been October 11 (1919) at Springfield. Three White-rumps on the 27th had, however, already been seen at the Amherst sewer beds. The last was at the partly frozen pool at noon October 29; and a second small sandpiper, probably of the same species, flew off before it could be well observed. Later that day a friend found there the last Red-backed Sandpiper. Our latest Whiterump record is October 31, 1925, but the Red-back has been very rare with us (the only recent record I know of is October 16-17, 1932); so these several late-coming birds at or near the pool were a very welcome find.

On only two days in all October did I completely miss water birds at this pool. October 20 was the first day of the pheasant-shooting season and I suppose that early hunters had scared the birds away before I got there. October 28 a strong north wind was blowing, and the birds were probably in the more sheltered. marshy country just to the south, where on October 30 and 31 I found the three species recorded on the table for those days. On November 1 these had gone and a single Killdeer was all I could find; November 2 there was nothing, and I ceased daily visits. On November 8, though the pool itself was frozen, two Greater Yellow-legs were to the south; and on November 11, when not a bit of unfrozen water or soil remained, one bird of this species, young-of-the-year, flew mournfully by, southeastward, faintly calling. Our latest previous date for Greater Yellow-legs was October 24, 1932.

The Lesser Yellow-legs, hitherto not known later than September 26, lingered at the pool until October 10. The Solitary Sandpiper was

last seen that same day. It has been recorded as late as October 20 (1929). The Spotted Sandpiper was not noted at the pool at all, but one was on the sandy river-beach October 17, two weeks later than its normal departure-date. The Peetoral Sandpiper resembled the Greater Yellow-legs in numbers and dates. It has become much more common here in the last few years than it used to be. The "Birds of Massachusetts" gives October 30 as its normal, November 11 as its latest, final date, but we know of one killed twenty miles south of here on November 23, 1901, at a still-open meadow spring. Two snipe were shot with it, and once or twice snipe have occurred even in December, but the extraordinary thing about the Hadley snipe of October. 1933, was not their date or even their large flocks but their overt, unwary assembling on the bare tobacco-field, where they probed the mud left by the slowly evaporating pool precisely as dowitchers might. Only their peculiar erouch, and immobility in that ungraceful pose, showed that instinctively they still relied on protective coloration-effective indeed among grasses but almost useless on this exposed site. Prominent they certainly were, second in this respect only to the Yellow-legs and Killdeers. Killdeers were the most notieeable bird about the pool, the only one remarked by most passers-by. The sixty counted on October 21 formed the biggest aggregation of Killdeers we have ever beheld here. This species was always the first to take alarm, and give it. In the early part of the month one flushed the Killdeers and, counting them in the air, watched them depart with real relief to be rid of their screaming, before one tried to serutinize the other birds present. If any had flown away with the Killdeers, it or they usually returned at once, whereas the two-belted alarmists were not likely to eome back while the observer stayed.

The three other plovers provided the happiest surprises, next to the Baird's Sandpiper, of this unprecedented shore bird month. The Golden Plover's arrival and departure, both, were witnessed. At 7:30 on October 5. a cloudy day of chill northeast winds, its sharp iambic call in the northern sky heralded its descent to the pool, where it associated with the Pectorals. Semipals, and White-rumps. It made a long flight westwards towards the river when too closely neared, but returned when the regretful observer retired. The next morning, about the same hour, after a night of rain, this immature plover rose into the air with the first scary Killdeers and headed their flock, flying with a single sharp call almost directly south. The Killdeers zigzagged and circled; they were not bound for South America; but this dark-eyed youngster. all alone, absolutely inexperienced in migration,

seemed to have a compass in his brain, knew what was "south" and went there, straight and swift. Once an abundant fall migrant down our river (Forbush, 1912, p. 344), the Golden Plover has been almost absent for half a century. The only recent record before this was one of a similar lone young bird associating with Killdeers on the river sands, August 31, 1931.

The Semipalmated Plover was a very tired, quiet young-of-the-year discovered at the pool's edge at 7:30 on October 18. The single Peetoral and Semipalmated Sandpipers bathed, preened, and fed close by it, while it stolidly rested. At 8:30 next day it was more active, and it was seen by others that afternoon. It probably departed early October 20 when every other shore bird deserted the pool. This species has become a regular late-May transient in recent springs, but is still unusual on its southward flight, and our latest date heretofore was September 12.

The Black-bellicd Plover is merely casual with us, and when the young bird of October 26 was first glimpsed, running over a harrowed field near a frozen little pool, and a single Killdeer, it was taken for another Golden. Like the Golden, it returned after being flushed. Its long bluish legs and cool rather than brown coloration looked suspicious, and of course in flight its white eroup, black axillars, and warble positively identified it. The previous night had been very cold (the main pool, two miles farther east, was iee-skimmed and without birds), and this occurrence seems phenomenally late.

The ducks that were at the pool on October 1 have been mentioned above. On Oetober 2 there were 12 Green-winged Teal. October 3. stalking the western, weedy part of the pool behind corn-shoeks, I got close to a flock "dipping" on it of 12 Green-wings, 1 Blue-wing, 6 Black Ducks, a female Mallard, 3 Pintails, and a male Wood Duck. This was the high point. October 5, 1 Green-wing and 2 Pintails; October 6, 2 Green-wings; October 7, a Pintail and a Black Duck; October 11, 1 Pintail; October 15, 2 Green-wings; October 16, the same (?) two in the air, closely accompanied in all their evolutions by six snipe; October 17, 2 Black Ducks, 1 Green-wing, and 2 larger, white-bellied ducks, either Wood or (I rather guess) Baldpate; and October 18, 1 Black, completes the duck story. Such a list, for a temporary, shrinking pool exposed to a road (and the duck-shooting season opened on October 16), is somewhat notable.

Of land birds the most conspicuous were Pipits and Rusty Blackbirds. The former were seen every day and were more numerous than I ever imagined they could be here, but on the last three days of October only a few appeared, and on November 1 and 2 only a single bird. The Rusties swarmed in the cornfield, but they too declined in numbers after October 25. whereas Grackles and Redwings proportionately increased then. Several times Redwings attacked Yellow-legs in the air, as if the latter were birds of prey, but the other blackbirds did not. Horned Larks first appeared October 23, and were noted in small flocks, flying, on most subsequent visits: and on October 30 hundreds of them were studied on the meadows to the west, and found to include a white-browed Prairie Horned Lark among each fifty or so Northerns. In the thickets to the east the first Fox Sparrow of the fall was noted on October 16, and the first Tree Sparrow October 21. A single Mourning Dove (rare herc in autumn) was present for eight days, October 18-25. Remarkable late records were those of an adult male Nashville Warbler October 19 and 20, a Phoebe October 23, and a Northern Yellowthroat October 26. A Junco with peculiarly blackish coloration, extending farther down its breast than usual, and with two distinct but narrow white wing-bars, was observed at close range on October 23; and another with brown back and pinkish sides on October 28; but no names or claims are to be attached to either. Eight or nine kinds of hawks were noted during the month, including a Duck Hawk October 31 and two Rough-legs October 16 and 29; and the body of a rccently shot Short-eared Owl was stumbled on in the fields to the west on October 31.

Disappointments, besides that at the failure to confirm my friend's Dowitchers and Stilt Sandpipers, were the absence of Sanderling. Western Sandpiper. Phalaropes, Coot. Gallinule. Ruddy Duck, and Horned Grebe. For each, I entertained some hope until the ice closed down. So far as I know, no member of the heron family ever visited the place, and I heard of but one Woodcock in the adjacent thickets. But a backward survey of the thirty-four consecutive visits paid to this spot is deeply satisfactory, and a gratifying memory to keep for years to come.

Smith College, Northampton, Mass.